



ICNS

Roadmaps to Success Visions of the Future

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Two Fundamental Truths ...

- NextGen is Critical ...

... To All of Us

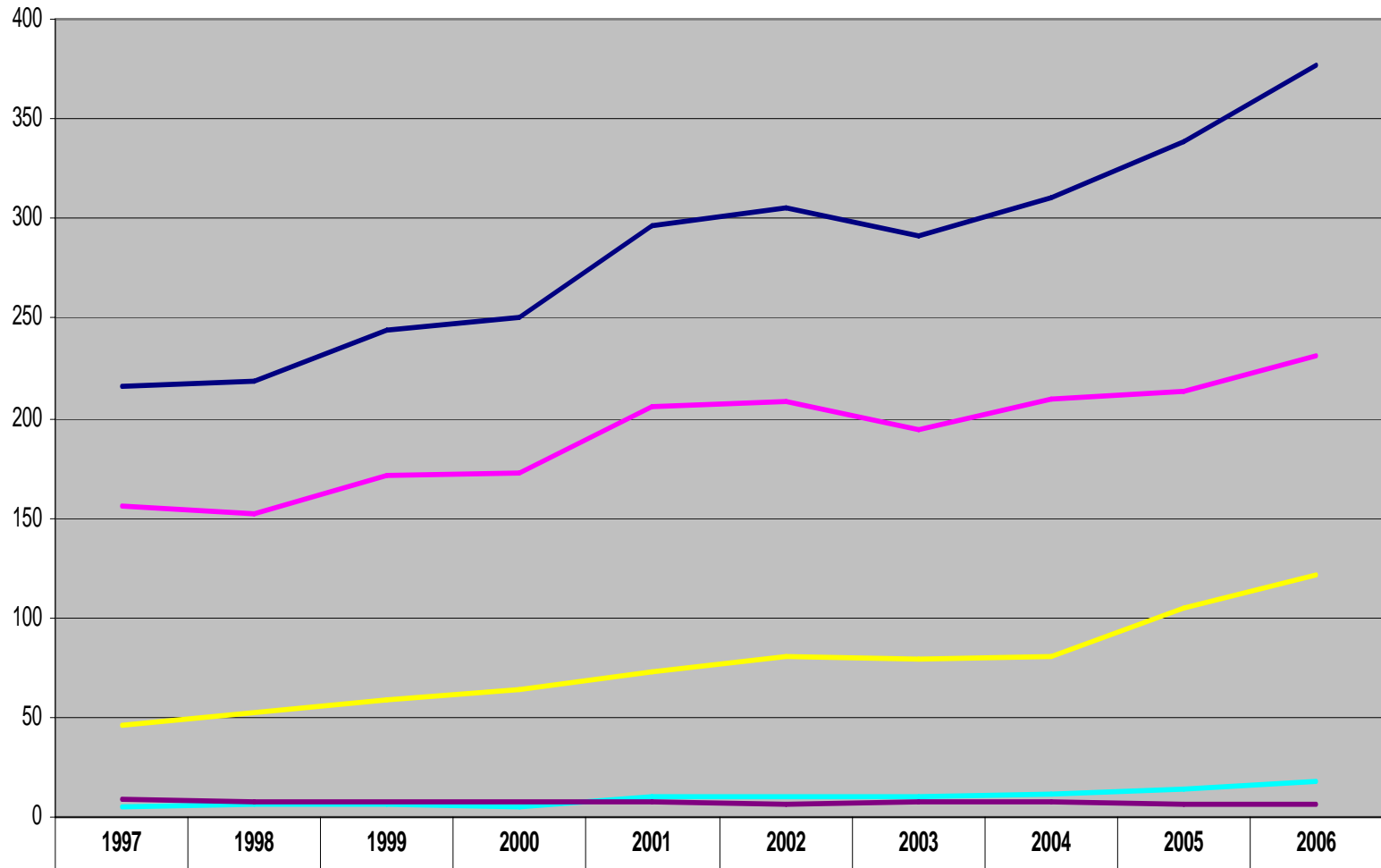
- Working Together ...

... We can make it a reality

RTCA Overview

- RTCA is the aviation community
 - Government and Industry, Domestic and International Users and Suppliers, DoD, Airlines and GA, Airports, Labor and Management
- We advance the art and science of aviation . . .
Particularly regarding CNS/ATM
 - Recommend new ops concepts; operate at the nexus of ops requirements and existing technology; address implementation
 - Emphasis on global harmonization / interoperability
 - Primary Characteristics: Collaboration, Consensus, Volunteerism
- We function as a Federal Advisory Committee
 - Embrace all segments of the aviation community
- We operate at two levels
 - At the “integrated systems” level
 - At the equipment performance level

RTCA Membership Growth



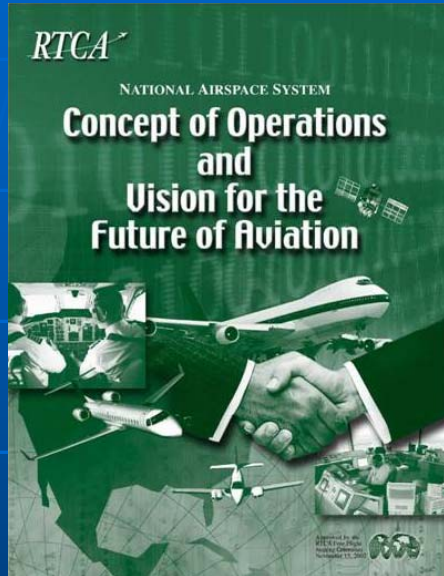
| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------|------|------|------|------|------|------|------|------|------|------|
| — Total | 216 | 219 | 244 | 250 | 297 | 305 | 291 | 310 | 339 | 377 |
| — Domestic Members | 156 | 152 | 171 | 173 | 206 | 208 | 194 | 210 | 213 | 231 |
| — International Associates | 46 | 53 | 59 | 64 | 73 | 80 | 79 | 81 | 105 | 121 |
| — Academic Associates | 5 | 6 | 6 | 5 | 10 | 10 | 10 | 11 | 14 | 18 |
| — U.S. Government | 9 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 7 | 7 |

RTCA Operations

- At the “Integrated Systems” level ...
 - Introduce new ops concepts, apply existing technology, recommend government and industry investments / milestones
- At Equipment Performance level ...
 - Refine ops concepts, recommend minimum operational performance standards
 - Partial basis for SARPs, TSOs, certification

Accomplishments

Concepts



Near, Mid, Far-Term concepts, including:

- SWIM
- Time-Based Trajectory
- RNP / RNAV Routes
- Time-Based Metering
- CDTI
- Surface Operations

"Integrated Systems"

- URET
- Retain Comm in VHF Spectrum
- Contract for Approach Procedures
- ADS-B Positioning Backup
- ADS-B Rulemaking

Equipment Performance

- VHF Communications / Datalink
- GPS
- WAAS
- ADS-B
- TCAS
- Avionics Software
- Environmental Testing

Current Activities

"Integrated Systems"

- Recommendations for:
 - Operational Evolution Partnership
 - ADS-B Out Implementation
 - Navigation Evolution Roadmap

Equipment Performance

- Data Communications for NextGen
- Satellite Based Navigation
- ADS-B In -- Merging and Spacing, CDTI
- Enhanced and Synthetic Vision
- Helo Terrain and Obstacle Awareness
- Development of Safety Critical Software
- Unmanned Aircraft Systems

Some of Today's Issues

■ NextGen Depends on CNS / ATM Changes

- How replace the all WX system that was planned by RTCA over 50 years ago (Collier Trophy)?
- How exploit current technology while keeping open the need for future enhancements?
- How assure global interoperability / harmonization?
- How keep public and private investments in sync?
- How implement aircraft centric, performance-based operations?
- What is the future role of pilots, controllers, IT?
- What is RTSP, do we need it, how do we achieve it?

Summary

- NextGen underway . . . via RTCA
- Shape the future of air transportation ...

... Participate in RTCA activities

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